

4. The system of claim 1, wherein the sensor is located within the cavity.

5. The system of claim 1, wherein the sensor is located adjacent to the cavity.

6. The system of claim 1, wherein the volume of fluid is substantially incompressible and substantially fills the cavity.

7. The system of claim 6, wherein the sensor is a pressure sensor that senses pressure changes in the fluid in the cavity.

8. The system of claim 6, wherein the sensor is a capacitive sensor that detects changes in the height of the fluid within the cavity.

9. The system of claim 6, wherein the sensor is a capacitive sensor including a first conductor and a second conductor that detect shifts of the volume of fluid within the cavity in between the first and second conductors, wherein the first conductor is located at a first level relative to the cavity and the second conductor is located at a second level relative to the cavity.

10. The system of claim 1, wherein the sensor is a capacitive sensor that includes a first conductor and a second conductor.

11. The system of claim 10, wherein the second conductor is a virtual ground.

12. The system of claim 10, wherein the first conductor and the second conductor are both located on the sheet and adapted to detect the distance between the first conductor and the second conductor.

13. The system of claim 10, wherein the second conductor is perpendicular to the first conductor.

14. The system of claim 10, wherein the second conductor extends substantially close to the center of the cavity.

15. The system of claim 10, wherein the second conductor substantially follows the shape of at least a portion of the perimeter of the cavity.

16. The system of claim 10, wherein the sheet includes a layer portion and a substrate portion, wherein the layer defines the surface and the substrate portion supports the layer portion; and wherein the capacitive sensor includes a first conductor coupled to the lower sheet portion and a second conductor coupled to the layer portion.

17. The system of claim 1, further comprising a processor coupled to the sensor and adapted to interpret the detected force.

18. The system of claim 17, wherein the processor is further adapted to interpret a magnitude of the force, wherein the processor determines a magnitude of the detected force and compares the magnitude to a threshold and outputs a first user input if the magnitude is less than the threshold and outputs a second user input if the magnitude is greater than the threshold.

19. The system of claim 17, wherein the processor is further adapted to interpret a change rate of the force, wherein the processor determines a change rate of the detected force and compares the change rate of the detected force to a threshold and outputs a first user input if the change rate is less than the threshold and outputs a second user input if the change rate is greater than the threshold.

20. The system of claim 1, wherein the sheet further, at least partially, defines a second cavity wherein expansion of the second cavity deforms a second particular region of the surface and wherein the sensor senses a force applied by the user to the first particular region independently from force applied to the second particular region.

21. The system of claim 20, further comprising a processor and wherein the processor selectively interprets sensor signals from the plurality of particular regions.

22. The system of claim 20, further comprising a processor and wherein the processor selectively actuates the expansion of the plurality of cavities, thereby selectively deforming the plurality of particular regions of the surface.

23. The system of claim 20 wherein the sensor includes an array of sensors, and wherein each sensor corresponds with one cavity and indicates to the processor the location of the particular region on which a force is applied by the user.

24. The system of claim 23, wherein the array of sensors includes first number of first conductors and a second number of second conductors, wherein the first number is equivalent to the number of cavities and the second number is less than the number of cavities, and wherein each first conductor corresponds to one cavity and each second conductor corresponds to a plurality of cavities.

25. The system of claim 23, wherein the array of sensors includes a first number of first conductors and a second number of second conductors, wherein the first number and the second number are both less than the number of cavities, and wherein the each first conductor corresponds to a plurality of cavities and each second conductor corresponds to a plurality of cavities.

26. The system of claim 23, wherein each sensor in the array of sensors sends a distinct signal that differentiates a first cavity from a second cavity.

27. The system of claim 23, wherein the sensors in the array of sensors are linked and send an overall sensor signal that indicates the states of individual cavities.

28. The system of claim 1, further comprising a display.

29. The system of claim 28, wherein the display visually outputs at least one image, wherein the image is an image of an input key substantially aligned with the particular region of the surface deformable by the cavity.

30. The system of claim 28, wherein the display visually outputs at least two images, wherein one image includes an image of an input key substantially aligned with the particular region of the surface deformable by the cavity.

31. The system of claim 30, wherein the two images include a first image and a second image, and wherein the first image is aligned with the particular region of the surface deformable by the cavity and the second image is aligned with the particular region of the surface deformable by the cavity upon removal of the first image.

32. A method of registering user interaction comprising the steps of:

providing a sheet that defines a surface on one side and at least partially defines a cavity on an opposite side;

providing a volume of a fluid contained within the cavity; modifying the volume of the fluid to expand the cavity, thereby outwardly deforming a particular region of the surface; and

detecting a force applied by a user that inwardly deforms the particular region of the surface.

33. The method of claim 32, wherein the step of detecting a force includes the steps of comparing a magnitude of the detected force to a threshold, further comprising the step of outputting a first user input if the magnitude is less than the threshold and outputting a second user input if the magnitude is greater than the threshold.

34. The method of claim 32, wherein the step of detecting a force includes the steps of determining a change rate of the